I. AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

- 1.-44. (canceled)
- 45. (currently amended) An isolated sentrin-specific protease (SENP) polypeptide comprising the amino acid sequence PIH^L/_RXVHW wherein X is a glycine, lysine or glutamic acid.
- 46. (previously presented) The isolated polypeptide of claim 45, comprising at least 25 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 47. (previously presented) The isolated polypeptide of claim 45, comprising at least 50 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 48. (previously presented) The isolated polypeptide of claim 45, comprising at least 100 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 49. (previously presented) The isolated polypeptide of claim 45, comprising at least 150 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 50. (previously presented) The isolated polypeptide of claim 45, comprising at least 200 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 51. (previously presented) The isolated polypeptide of claim 48, further comprising amino acid residues 400 to 509 of SEQ ID NO: 8.
- 52. (canceled)
- 53. (previously presented) The isolated polypeptide of claim 48, further comprising amino acid residues 461 to 568 of SEQ ID NO: 10.
- 54. (previously presented) The isolated polypeptide of claim 45, comprising SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
- 55. (currently amended) An isolated polypeptide comprising <u>at least 25 contiguous amino</u> acids of SEQ ID NO: 2 a sentrin-specific protease SENP1.
- 56. (cancelled)
- 57. (previously presented) The isolated polypeptide of claim 55, comprising at least 50 contiguous amino acids of SEQ ID NO: 2.

- 58. (previously presented) The isolated polypeptide of claim 55, comprising at least 100 contiguous amino acids of SEQ ID NO: 2.
- 59. (previously presented) The isolated polypeptide of claim 55, comprising at least 150 contiguous amino acids of SEQ ID NO: 2.
- 60. (previously presented) The isolated polypeptide of claim 55, comprising at least 200 contiguous amino acids of SEQ ID NO: 2.
- 61. (canceled)
- 62. (canceled)
- 63. (currently amended) The isolated polypeptide of claim 55, wherein the SENP1 polypeptide comprises SEQ ID NO: 2.
- 64. (currently amended) A method of purifying the a sentrin-specific protease SENP1 polypeptide of claim 55 from a sample comprising collecting a sentrin-specific protease polypeptide sample; incubating the sample with an antibody that specifically binds the SENP1 polypeptide; and obtaining the SENP1 polypeptide.
- 65. (previously presented) The method of claim 64, wherein the purified SENP1 polypeptide comprises the amino acid sequence of SEQ ID NO: 2.